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Substitute for form 1449A/PTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet **3** of **12****Complete if Known**

Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002811US

U.S. PATENT DOCUMENTS

Examiner	Cite No. ¹	Document Number Number Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
	AA	08/751,189	11-18-88	Harrington, et al.	
	AB	80/038,750	02-20-1987	Counter, et al.	
	AC	3,817,837	08-18-1974	Tenenholz et al.	
	AD	3,850,762	11-28-1974	Schuurs et al.	
	AE	3,838,380	02-17-1076	Kronick et al.	
	AF	3,888,345	12-01-1976	Ullman et al.	
	AG	4,273,148	06-23-1981	Litman et al.	
	AH	4,277,437	07-07-1981	Maggio	
	AI	4,386,241	12-28-1982	Tom et al.	
	AJ	4,683,185	07-28-1987	Mullis et al.	
	AK	4,883,202	07-28-1987	Mullis	
	AL	4,818,567	03-28-1988	Cabilly et al.	
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	AN	5,489,508	02-08-1998	West et al.	
	AO	5,563,016	12-10-1998	Vilaponteau et al.	
	AP	5,747,317	05-05-1998	Cao	
	AQ	5,770,422	08-23-1998	Collins	
	AR	6,083,809	07-25-2000	Cech, et al.	
	AS	6,258,636 - B1	07-10-2001	Vilaponteau et al.	
	AT	6,261,566 - B1	07-17-2001	Weinrich et al.	
	AU	6,261,836 - B1	07-17-2001	Cech et al.	
	AV	6,083,809	07-25-2000	Cech et al.	
	AW	6,188,178	12/28/2000	Cech et al.	
	AX	6,475,789 B1	11-05-2002	Cech et al.	

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T [†]
		Country Code ³	Number ⁴	Kind Code ⁵ (if known)				
	AY	JP	09154575-A		08-17-97			
	AZ	PCT	WO 84/03564		09-13-84			
	BA	PCT	WO 85/13382		05-18-85			
	BB	PCT	WO 86/01835		01-25-86			
	BC	PCT	WO 88/12811		05-02-88			
	BD	PCT	WO 88/19580		06-27-88			
	BE	PCT	WO 88/40868		12-18-88			
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Substitute for form 1449A/PTO		Complete If Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/432,503
		Filing Date	November 2, 1999
		First Named Inventor	Cech, Thomas R., et. al.
		Art Unit	1652
		Examiner Name	Peter P. Tung
		Attorney Docket Number	015389-002611US
Sheet	4	of	12

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	BF	PCT	WO 98/01542			01-15-98	
	BG	PCT	WO 98/01543			01-15-98	
	BH	PCT	WO 98/07838			03-05-98	
	BI	PCT	WO 98/08838			02-26-98	
	BJ	PCT	WO 98/21343			05-22-98	
	BK	PCT	WO 98/37181			08-27-98	
	BL	PCT	WO 98/45450			10-15-98	
	BM	PCT	WO 98/59040			12/30/98	
	BN	PCT	WO 99/01560			01/14/99	

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Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE
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Sheet 5 of 12

Complete if Known

Application Number	09/432,503
Filing Date	November 2, 1999
First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS); title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-Issue number(s), publisher, city and/or country where published.	T ²
	BO	1994 Genome Issue of <i>Science</i> (265:1981f)	
	BP	Anderson and Young, "Quantitative Filter Hybridization" in <i>Nucleic Acid Hybridization</i> pp73-111 (1985)	
	BQ	Ausubel et al., (1989); <i>Current Protocols in Molecular Biology</i> ; pp 5.1-5.11, 16.1-16.3 and 16.9-16.20; John Wiley & Sons, New York NY	
	BR	Autexier et al., "Reconstitution of human telomerase activity and identification of a minimal functional region of the human telomerase RNA," (1996) <i>EMBO J</i> , 15:5928	
	BS	Autexier and Greider, "Functional reconstitution of wild-type and mutant <i>Tetrahymena</i> telomerase," (1994) <i>Genes Develop.</i> , 8:563	
	BT	Berger and Kimmel, <i>Guide to Molecular Cloning Techniques</i> ; (1987); Meth. Enzymol.; vol. 152; pp 305-389; Academic Press; San Diego CA	
	BU	Blessman et al., "Addition of Telomere-Associated HeT DNA Sequences "Heals" Broken Chromosome Ends in <i>Drosophila</i> ," (1990) <i>Cell</i> , 61:663	
	BV	Bitter et al., "Expression and secretion vectors for yeast," <i>Meth Enzymol.</i> , (1987) 153:516	
	BW	Blackburn and Chiu, "Non-nucleosomal packaging of a tandemly repeated DNA sequence at termini of extrachromosomal DNA coding for rRNA in <i>Tetrahymena</i> ," (1981) <i>Proc. Natl. Acad. Sci.</i> , 78:2263	
	BX	Blackburn and Gall, "A tandemly repeated sequence at the termini of the extrachromosomal ribosomal RNA genes in <i>Tetrahymena</i> ," (1978) <i>J. Mol. Biol.</i> , 120:33	
	BY	Blackburn, "Telomerases," (1992) <i>Ann. Rev. Biochem.</i> , 61:113	
		Bodnar et al., "Extension of Life-Span by Introduction of Telomerase into Normal Human Cells," (1998) <i>Science</i> , 279:349	
		Bradford, "A Rapid and Sensitive method for the Quantitation of Microgram Quantities of Protein Utilizing the Principle of Protein-Dye Binding," (1976) <i>Anal. Biochem.</i> , 72:248	
		Braunstein et al., "Transcriptional silencing in yeast is associated with reduced nucleosome acetylation," (1993) <i>Genes Develop.</i> , 7:592	

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		Filing Date	November 2, 1999
		First Named Inventor	Cech, Thomas R., et. al.
		Art Unit	1652
		Examiner Name	Peter P. Tung
		Attorney Docket Number	015389-002611US
Sheet	6	of	12

OTHER PRIOR ART -- NON PATENT LITERATURE DOCUMENTS			
Examiner Initials *	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
		Calvio <i>et al.</i> , "Identification of hnRNP P2 as TLS/FUS using electrospray mass spectrometry," (1995) <i>RNA</i> , 1:724	
		Caruthers <i>et al.</i> , "New chemical methods for synthesizing polynucleotides," (1980) <i>Nucleic Acids Res. Symp. Ser.</i> , 215-223	
		Chan and Tye, "Organization of DNA sequences and replication origins at yeast telomeres," (1983) <i>Cell</i> , 33:563	
		Colbere-Garapin <i>et al.</i> , "A new dominant hybrid selective marker for higher eukaryotic cells," (1981) <i>J. Mol. Biol.</i> , 150:1	
		Cote <i>et al.</i> , "The EBV-hybridoma technique and its application to human lung cancer," <i>Monoclonal Antibodies and Cancer Therapy</i> , Alan R. Liss Inc., New York NY 77-96 (1985)	
		Collins <i>et al.</i> , "Purification of Tetrahymena telomerase and cloning of genes encoding the two protein components of the enzyme," (1995) <i>Cell</i> , 81:677	
		Conrad <i>et al.</i> , "RAP1 protein interacts with yeast telomeres in vivo: Overproduction alters telomere structure and decreases chromosome stability," (1990) <i>Cell</i> , 63:739	
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		Cote <i>et al.</i> , "Generation of human monoclonal antibodies reactive with cellular antigens," (1983) <i>Proc. Natl. Acad. Sci.</i> , 80:2026	
		Counter <i>et al.</i> , "The catalytic subunit of yeast telomerase," (1997) <i>Proc. Natl. Acad. Sci.</i> , 94:9202	
		Counter <i>et al.</i> , (1994) <i>Proc. Natl. Acad. Sci.</i> , 91:2900	
		Craighton; <i>Proteins, Structures and Molecular Principles</i> ; (1983); pp. 1-60; WH Freeman and Co; New York, NY	
		Dieffenbach and Dveksler; <i>PCR Primer, a Laboratory Manual</i> ; (1995) pp. 131-156, 453-462 and 507-580; Cold Spring Harbor Press, Plainview NY	
		Duplea <i>et al.</i> , "Quantitative analysis of polymerase chain reaction products using biotinylated dUTP incorporation," (1993) <i>Anal. Biochem.</i> , 212:229	

Examiner Signature		Date Considered	
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Sheet

7

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Examiner Name	Peter P. Tung
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		Fang <i>et al.</i> , "Oxytricha telomere-binding protein: separable DNA-binding and dimerization domains of the α -subunit," <i>Genes Develop.</i> 7:870 (1993) and Gray <i>et al.</i> , (1991) <i>Cell</i> 67:807	
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		Genbank accession no. AA311750; April 19, 1997	
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		Greider, "Telomere Length Regulation," (1996) <i>Ann. Rev. Biochem.</i> , 65:337	

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Sheet 8

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First Named Inventor	Cech, Thomas R., et. al.
Art Unit	1652
Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS

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		Hampton <i>et al.</i> ; <i>Serological Methods a Laboratory Manual</i> ; (1990); pp. 33-86, 179-286; APS Press, St Paul MN	
		Harrington <i>et al.</i> , "A Mammalian Telomerase-Associated Protein," (1987) <i>Science</i> , 275:973	
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		Huse <i>et al.</i> , "Generation of a large combinatorial library of the immunoglobulin repertoire in phage lambda," (1989) <i>Science</i> , 246:1275	
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		Koehler and Milstein, "Continuous cultures of fused cells secreting antibody of predefined specificity," (1975) <i>Nature</i> 256:495	
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		Lamond and Sproat; (1994) "Isolation and Characterization of Ribonucleoprotein Complexes;" In <i>RNA Processing: A Practical Approach</i> ; (Higgins, S.J. and Hawes, B.D, Eds.), Volume 1; pp103-140	
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		Lowy et al., "Isolation of transforming DNA: Cloning the hamster apt gene," (1980) <i>Cell</i> , 22:817	
		Lustig and Petes, Identification of yeast mutants with altered telomere structure," (1986) <i>Proc. Natl. Acad. Sci.</i> , 83:1398	
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		McEachern and Blackburn, "runaway telomere elongation caused by telomerase RNA gene mutation," (1995) <i>Nature</i> , 376:403	
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		Application Number	09/432,503
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Filing Date	November 2, 1999
		First Named Inventor	Cech, Thomas R., et. al.
		Art Unit	1652
		Examiner Name	Peter P. Tung
		Attorney Docket Number	015389-002611US
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Sheet	10	of	12

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		Meyerson <i>et al.</i> , "hEST2, the Putative Human Telomerase Catalytic Subunit Gene, Is Up-Regulated in Tumor Cells and during Immortalization," (1997) <i>Cell</i> , 90:785	
		Murray, <i>In McGraw Hill Yearbook of Science and Technology</i> , (1992) McGraw Hill, New York NY, pp 191-196	
		Nakamura <i>et al.</i> , "Telomerase Catalytic Subunit Homologs from Fission Yeast and Human," (1997) <i>Science</i> , 277:955	
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		Romero and Blackburn, "A conserved secondary structure for telomerase RNA," (1991) <i>Cell</i> , 67:343	
		Sambrook <i>et al.</i> ; <i>Molecular Cloning, A Laboratory Manual</i> ; (1989); pp. 8.1-8.86 and 16.1-17.44; Cold Spring Harbor Press, Plainview NY	

Examiner Signature		Date Considered	
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Examiner Name	Peter P. Tung
Attorney Docket Number	015389-002611US

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		Sandell et al., "Transcription of yeast telomere alleviates telomere position effect without affecting chromosome stability," (1994) <i>Proc. Natl. Acad. Sci.</i> , 91:12061	
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		Tommerup et al., "Unusual chromatin in human telomeres," (1994) <i>Mol. Cell. Biol.</i> , 14:5777	
		Trask, "Fluorescence in situ hybridization: application in cytogenetics and gene mapping," (1991) <i>Trends Genet.</i> , 7:149	
		Verma et al., "Human Chromosomes: A Manual of Basic Techniques," (1988); pp. 4-30, 152-190; Pergamon Press, New York NY	
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		Wellinger et al., "Saccharomyces Telomeres Acquire Single-Strand TG ₁₋₃ Tails Late In S Phase," (1993) <i>Cell</i> 72:51	
		Whitehead Institute/MIT Center for Genome Research, Genetic Map of the Mouse, Database Release 10, April 28, 1995	
		Wigler et al., "Transfer of purified herpes virus thymidine kinase gene to cultured mouse cells," (1977) <i>Cell</i> , 11:223	
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